

(2) If it has been found needful to attack vigorously the bones of the skull, or even to apply some of the caustic, to diseased dura mater, and if, during the first ten days after the operation, fits make their appearance, it does not necessarily follow that cerebral inflammation is setting in. According to Mr. Moore¹ the fits may be slight and the unconsciousness of brief duration, or severe and attended with coma, but as a rule they are recovered from.

(3) Secondary hæmorrhage. This is rare after the use of zinc-chloride, which forms a dry black slough, and also seems to me to prevent the risk of pyæmia. But if the cautery only has been used, the amount of fœtor is much greater, and in parts so vascular, secondary hæmorrhage may easily occur, if the wound is foul.

(4) Recurrence. The patient must always be most carefully watched and in the case of extensive and deep disease, any suspicious granulations that appear must be attacked at once.

(5) When after a severe operation, a plastic operation cannot be performed, very much may be done by a well made vulcanite mask, as is shown in Figs. 6 and 7 in Mr. Moore's book.

THE PADDED BOARD STRETCHER IN THE TREATMENT OF HIP DISEASE AND VARIOUS TRAUMATA.

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FOR several years I have used the following contrivance in the treatment of hip disease, and traumata, with the most satisfactory results. As far as I know the device is novel.

¹Loc. supra. cit., p. 54. So too Mr. Lawson, speaking of the removal of malignant tumors of the orbit (Dict. of Surg. vol. ii p. 119) says that he has three times seen epileptic convulsions follow within 36 hours of the operation, but they have in each case ceased after the removal of the zinc-chloride from the orbit.

The apparatus is a light, smooth, rectangular pine board, about a foot longer than the patient, and eight inches broader, and one inch thick. Six inches from one end of this, there should be fastened by screws, and light iron supports (underneath) a light, firm foot piece, which should extend across the longer board, and in breadth should be an inch or two more than the length of the patient's feet. In profile thus :



FIG. 1. PROFILE OF PADDED BOARD STRETCHER.

- a.* Long board.
- b.* Foot piece.
- c.* Iron supports.

The face of the long board should be padded, and quilted, this covering being firmly secured by tacks. The covering material should be rough and retentive, to prevent slipping. Along the sides and ends, hand are holes cut, on the bottom corners, iron teeth are set to keep the board from slipping when placed against the wall, etc. In addition to this, other appendages can be attached; as arm slings and supports, a movable table shelf, perineal, head, and foot pullies or fastenings or suitable openings may be cut through for purpose of stool, decubital ulcers, etc. The patient is so placed on this apparatus (naturally resection, redressement or fixation if necessary precede this) that the foot of the sound limb rests upon the cross piece. The board then being elevated at the head brings the diseased limb and joint in extension. (Hutchinson.) Further extension and body fixation can be obtained as desired by a leaden soled shoe, by foot, perineal, head and lumbar fastenings or pulleys or apparatus after the methods of Gurdon Buck, Volkmann; Rauchfuss, Koenig, et al. Usually, an inch

block of wood should be placed under the foot of the sound limb.

Now the patient is in that shape that he may have his body placed in any suitable angle by raising and leaning the head of the board against a wall or tree. Folding legs can be hinged on beneath, after the manner of a portable cot, and on this arrangement the patient can be comfortably transported. In point of portability it resembles the Sayre-Bonnet cuirass, with obvious points of advantage, as cheapness, comfort, cleanliness, and in permitting any form of fixation or extension dressing. But in the garden and chamber, it finds its largest scope for use, and comfort. I have used it as a hammock and seesaw, young children could be bandaged papoose style upon it, or adjustable rockers fitted to it, and it is used as a crib, etc. It nicely substitutes Volkmann's lifting frame, and presents little trouble in the process of transfer of the patient, from the bed to it or vice versa. It can be placed in the bed beside the patient and with a little manœuvering they learn to get off, and on it: one patient getting on it in the night when she became restless or wished to void her stools. I have usually begun by keeping the patient on the board for an hour or so at first, and then gradually increased the time, not permitting him to tire by keeping too long in one position. Usually, one attendant can manage the patient without difficulty. The greatest claim for this apparatus, is its excellent fitness for those very worst cases in which nothing seems able to be done, *e. g.* in old chronic bed ridden cases, in which hypostases, indigestion, and amyloid troubles exist. In other tubercular complications, as of viscera or other joints, spondylitis, marasmus, or chronic atrophy, with fatty degeneration of viscera, muscles and ligaments, as a last refuge it will be found to do good work. By changing the circulatory, and pressure planes of the body it inaugurates a system of gymnastics to the viscera—notably the heart—muscles, ligaments, etc. It starts a metabolism, an exercise of function, and that, in so delicate, and harmless a way, that it may be begun when the powers of the sufferer are almost nil, and can be increased almost to normal. In one case the patient was in extremis, marasmatic; so weak was her heart that when she was first

placed on the board (changed on a sheet hammock wise) if the head of it were raised but 20° from the horizon, she would go into syncope. She shortly improved sufficient to stand ætherization, and *redressement forcé*, and walks to-day with the aid of a stick. By this means, hypostatic catarrhs, pain in the knee and hip disappear at once, and the appetite and sleep improve.

I would recommend in very weak patients that the elevations be begun gradually and carefully, and that extension methods be exchanged, using Buck's when the patient is abed. One of the best gymnastics in the earlier stages, is to balance the board on the foot board of the bed and use a gentle see-saw motion, also use massage, passive exercises, riding, etc. Norwegian oil, beer, tokayer, and toddy to be given freely. The writer hazards the following on the various peripatetic apparatuses that are in common use. In all of these, is there not under the most favorable adjustment, a modicum of movement in the diseased joint, and is not this movement (in some cases) productive of local and constitutional irritation sufficient to hinder or delay repair, in a local or general way? Are not these apparatuses when properly understood, of a very much more limited field of application than is given to them? Are they harmless? Who but a master in their use can prevent progressive adduction and contraction? And do they really? Are they adapted to hospital or pauper practice? Are coxitic patients' nutritive powers usually sufficient to carry on repair and body exercise, and possibly withstand injurious irritation? Naturally, they are reciprocal up to a certain extent, but suppose that standard is exceeded or mistaken, will not harm follow? Are ambulatory contrivances of the value that the profession has heretofore conventionally (perhaps perfunctorily) ascribed to them? The endeavour has been to fulfill certain indications that are not entirely secured by the usual means, such as easy adaptability, practicability, comfort, safety,—but above all things else, that cheapness and simplicity, that will give it to the afflicted poor.